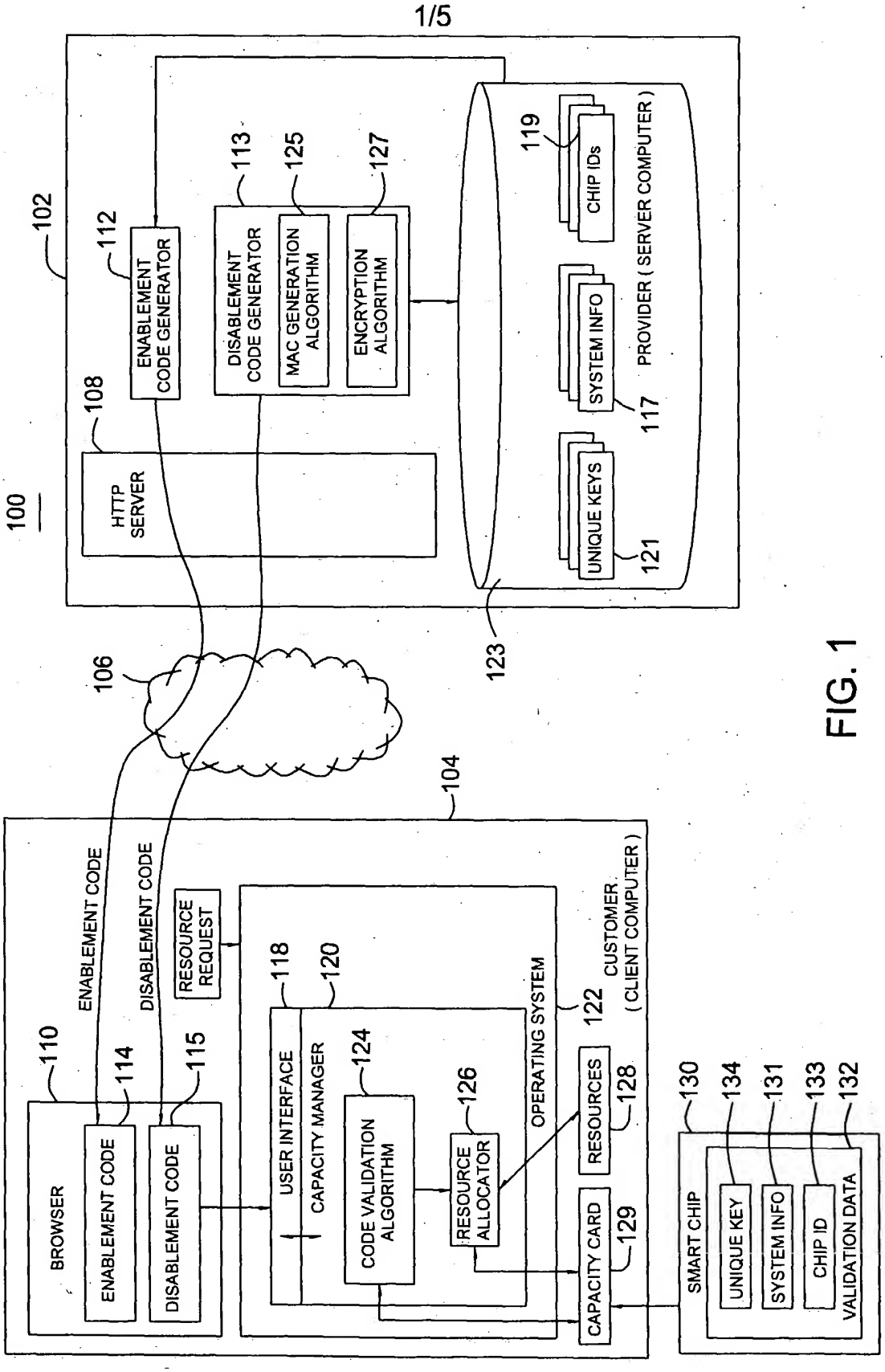
100
102
HTTP SERVER
108
ENABLEMENT CODE GENERATOR
112
DISABLEMENT CODE GENERATOR
113
MAC GENERATION ALGORITHM
125
ENCRYPTION ALGORITHM
127
PROVIDER (SERVER COMPUTER)
CHIP IDs
119
SYSTEM INFO
117
UNIQUE KEYS
121
123
106
104
ENABLEMENT CODE
DISABLEMENT CODE
RESOURCE REQUEST
BROWSER
110
ENABLEMENT CODE
114
DISABLEMENT CODE
115
USER INTERFACE
118
CAPACITY MANAGER
120
CODE VALIDATION ALGORITHM
124
RESOURCE ALLOCATOR
126
OPERATING SYSTEM
122
CUSTOMER (CLIENT COMPUTER)
RESOURCES
128
CAPACITY CARD
129
SMART CHIP
130
UNIQUE KEY
134
SYSTEM INFO
131
CHIP ID
133
VALIDATION DATA
132

FIG. 1

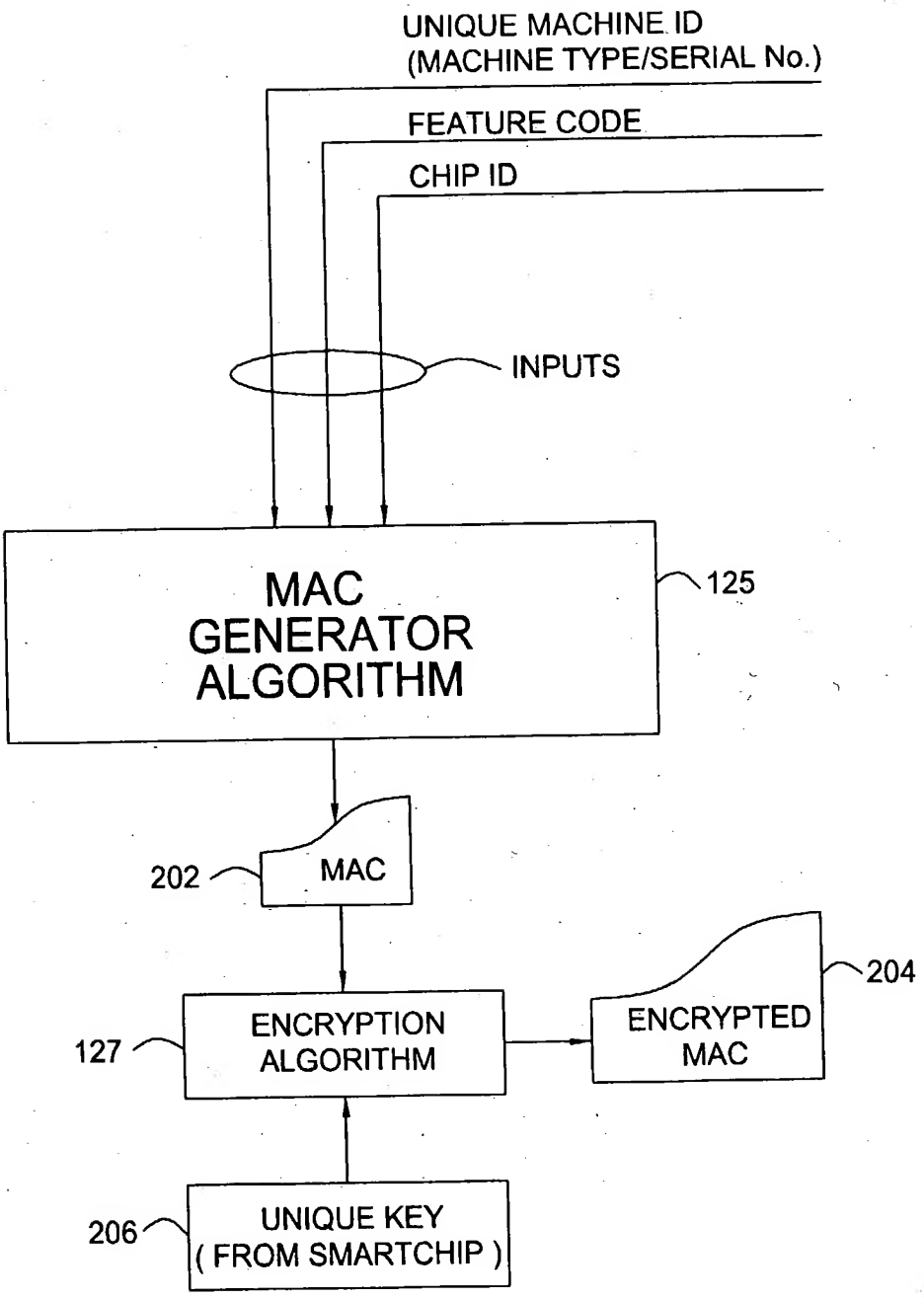
UNIQUE MACHINE ID
(MACHINE TYPE/SERIAL No.)
FEATURE CODE
CHIP ID
INPUTS
MAC
GENERATOR
ALGORITHM
125
202
MAC
127
ENCRYPTION
ALGORITHM
ENCRYPTED
MAC
204
206
UNIQUE KEY
(FROM SMARTCHIP)

FIG. 2

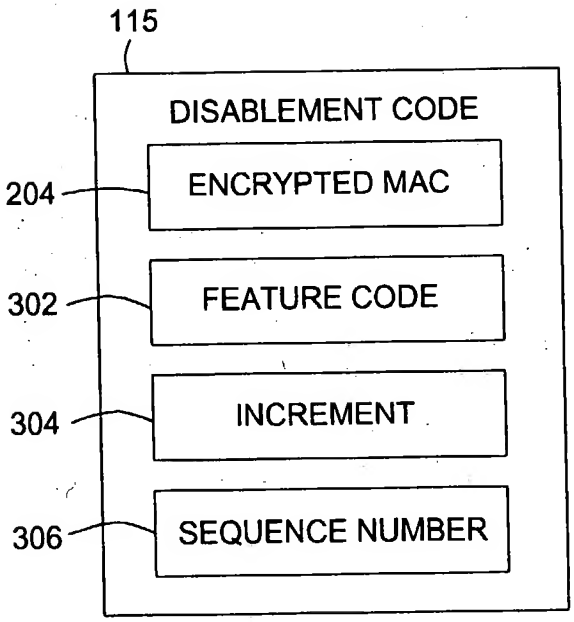
115
DISABLEMENT CODE
204
ENCRYPTED MAC
302
FEATURE CODE
304
INCREMENT
306
SEQUENCE NUMBER

FIG. 3

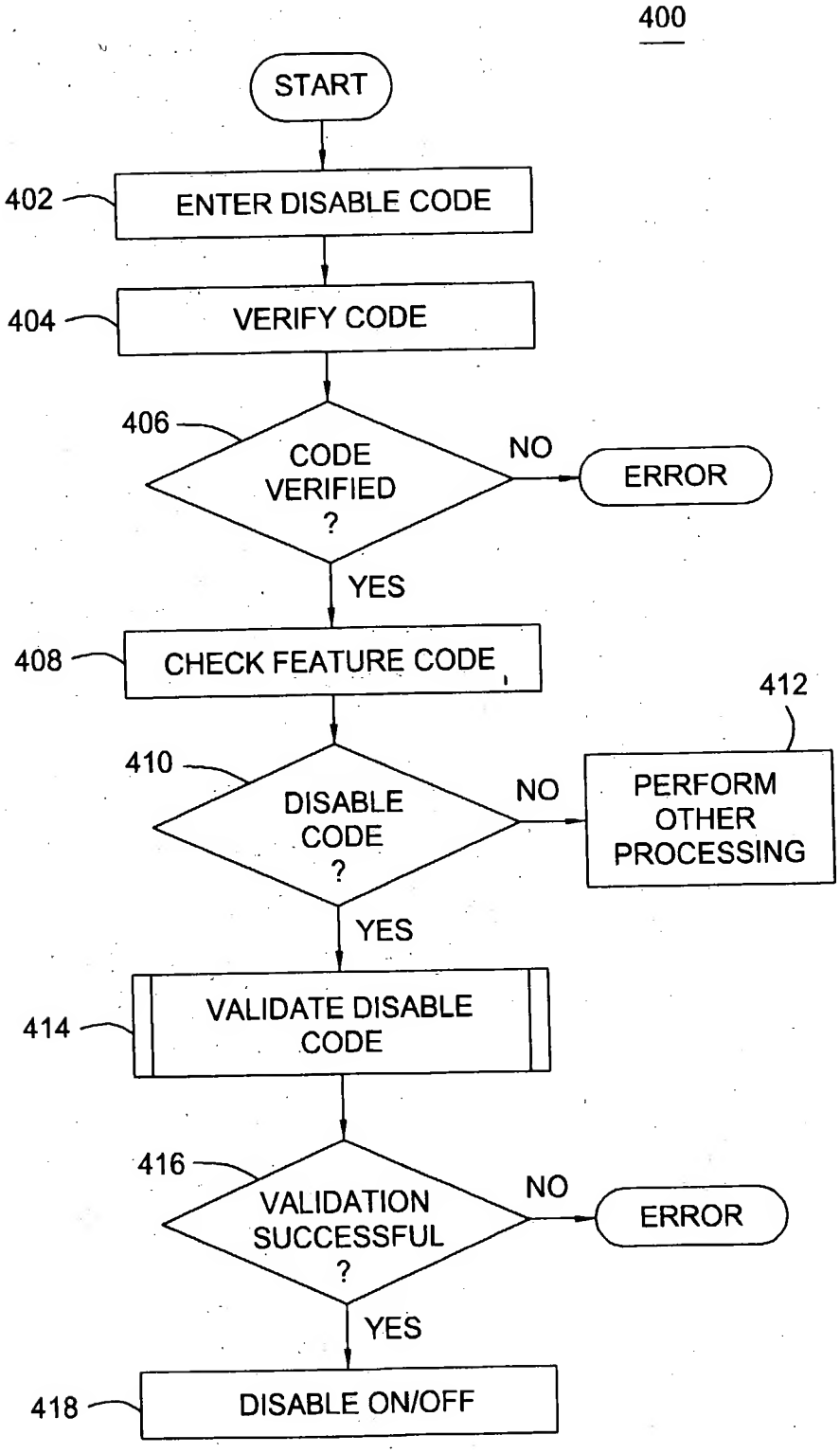
400
START
402
ENTER DISABLE CODE
404
VERIFY CODE
406
CODE VERIFIED ?
NO
ERROR
YES
408
CHECK FEATURE CODE
412
410
DISABLE CODE ?
NO
PERFORM OTHER PROCESSING
YES
414
VALIDATE DISABLE CODE
416
VALIDATION SUCCESSFUL ?
NO
ERROR
YES
418
DISABLE ON/OFF

FIG. 4

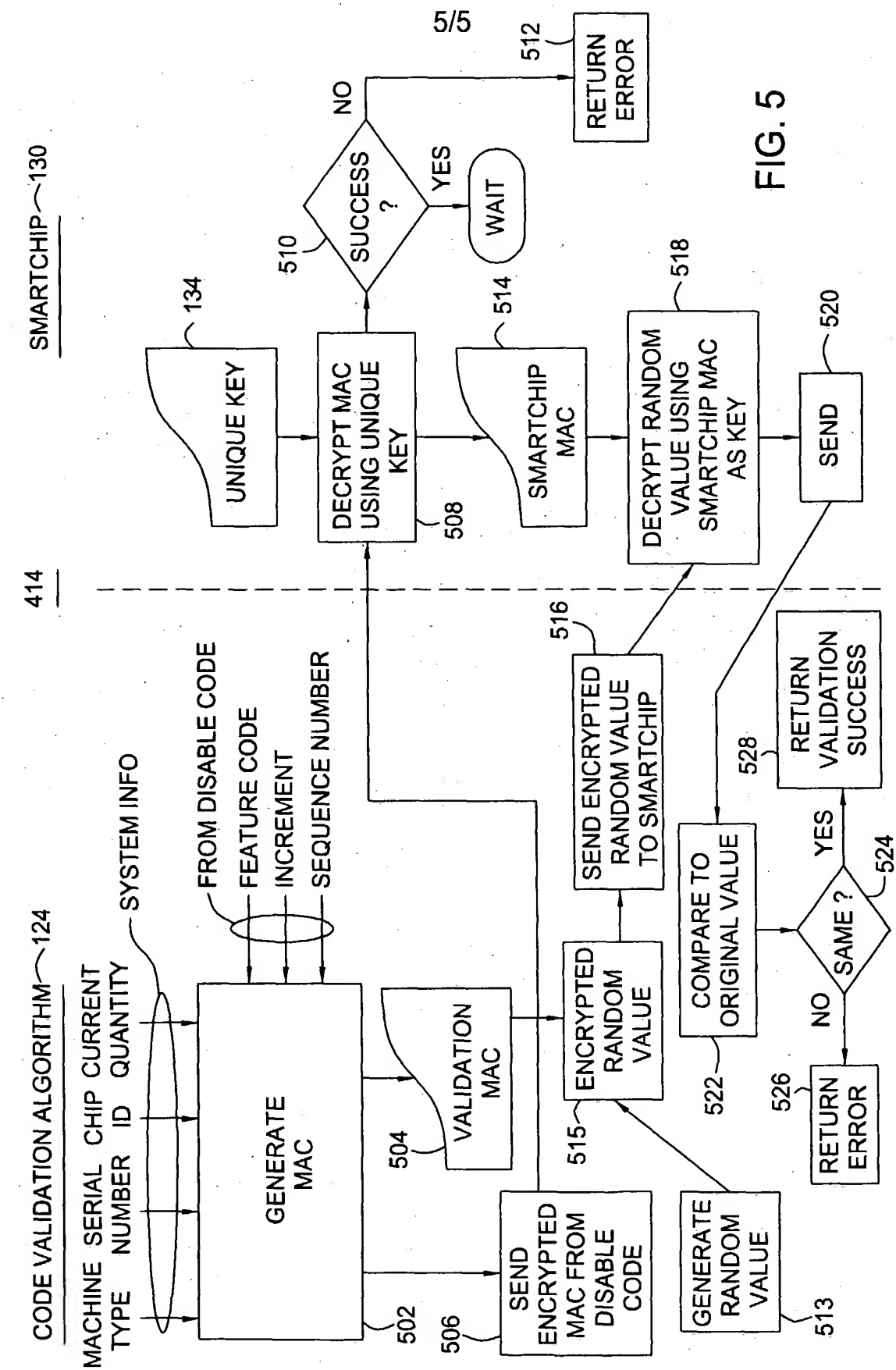
CODE VALIDATION ALGORITHM 124
MACHINE SERIAL CHIP CURRENT
TYPE NUMBER ID QUANTITY
SYSTEM INFO
FROM DISABLE CODE
FEATURE CODE
INCREMENT
SEQUENCE NUMBER
GENERATE MAC
502
VALIDATION MAC
504
SEND ENCRYPTED MAC FROM DISABLE CODE
506
414
SMARTCHIP 130
UNIQUE KEY
134
DECRYPT MAC USING UNIQUE KEY
508
SUCCESS ?
510
NO
YES
WAIT
RETURN ERROR
512
SMARTCHIP MAC
514
ENCRYPTED RANDOM VALUE
515
SEND ENCRYPTED RANDOM VALUE TO SMARTCHIP
516
GENERATE RANDOM VALUE
513
DECRYPT RANDOM VALUE USING SMARTCHIP MAC AS KEY
518
SEND
520
COMPARE TO ORIGINAL VALUE
522
SAME ?
524
YES
NO
RETURN ERROR
526
RETURN VALIDATION SUCCESS
528

FIG. 5